

REMARKS

Claims 1 to 20 are pending in this application. Claims 1 and 3 are the only independent claims, both of which have been amended to advance the prosecution of the subject application. In the prior Office Action, claims 1 and 2 have been rejected under 35 U.S.C. § 103(a) over US Patent No. 5,956,600 to Kuroi et al., in view of Wolf et al., *Silicon Processing for the VLSI Era*, vol. 1, Lattice Press (1986). Claims 3, 11-19 have been rejected under § 103(a) over US Patent No. 5,738,757 to Burns et al., in view of Wolf. Claim 4 has been rejected under § 103(a) over Burns, in view of Wolf, in further view of Streetman, *Solid State Electronic Devices*, Prentice Hall (1990). Claims 1-2, 5-10 have been rejected under § 103(a) over U.S. Patent No. 5,956,600 to Kuroi et al. in view of U.S. Patent No. 6,464,842 to Golovchenko et al. and U.S. Patent No. 6,508,946 to Murakami. Claim 20 has been rejected under § 103(a) over Burns, in view of Murakami. Applicant respectfully submit that all pending claims in the subject application are allowable over the cited art in view of the above claim amendments and the following remarks.

Independent claim 1 requires “forming at least one stress relaxing groove partially in said silicon nitride film ... to relax film stress to be applied to said aperture.”

Neither Kuroi nor Wolf teach the above claim features in independent claim 1. Kuroi and Wolf are silent about a stress relaxing groove, much less one that is partially in the silicon nitride film as required in independent claim 1. Therefore, independent claim 1 and dependent claim 2 each patentably distinguish over Kuroi and Wolf.

Independent claim 3 requires “a mask opening of rectangular shape” and “forming at least one film stress relaxing groove partially in said silicon nitride film, said film stress relaxing groove relaxing film stress applied to said mask opening.”

Burns and Wolf do not teach the above claim features in independent claim 3. For example, in Burns, the removed portion in the silicon nitride layer (14) forms the pattern in the first mask, which is used in a multi-depth etching of the silicon wafer (see, e.g., FIG. 2F). Consequently, the removed portion cannot relax film stress applied to the mask opening as required in independent claim 3, because the removed portion is *itself* the mask opening. Moreover, if such removed portion were considered as a film stress relaxing groove, then Burns would not have taught "etching *a lamination layer* of said silicon oxide film and said silicon nitride film to form a mask opening," as is required in independent claim 3.

Therefore, independent claim 3 and dependent claims 11-19 each patentably distinguish over Burns and Wolf.

Claim 4 depends from independent claim 3. Streetman is cited in the prior Office Action with respect to the additional features in claim 4 and does not cure the deficiency of Burns and Wolf. Therefore claim 4 is allowable for at least the same reasons that independent claim 3 is allowable.

As is submitted above, Kuroi does not teach a stress relaxing groove as is required in independent claim 1. Golovchenko and Murakami on the other hand are cited in the prior Office Action with respect to the alkali etchant in independent claim 1 and additional features in dependent claims 2 and 5-10. Consequently, Golovchenko and Murakami do not cure the deficiencies of Kuroi with respect to independent claim 1. Accordingly, independent claim 1 and its dependent claims 2 and 5-10 each patentably distinguish over Kuroi and Golovchenko and Murakami.


Claim 20 depends from independent claim 3. Murakami is cited in the prior Office Action with respect to the additional features in claim 20 and does not cure the

deficiency of Burns with respect to independent claim 3. Therefore claim 20 is allowable for at least the same reasons that independent claim 3 is allowable.

In view of the foregoing, each of the pending claims 1 to 20 in this patent application is believed to be in immediate condition for allowance and such action is earnestly solicited.

Respectfully submitted,

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